

## **Extended Transfer Platform**

[0001] This application, filed on behalf of the inventors, Glenn A. Peterson and Michelle Jones, for an Extended Transfer Platform, is a continuation-in-part of U.S. Patent application number 10/238,472, which is a continuation of U.S. Patent application number 09/629,957, now 5 United States Patent Number 6,467,102, both of which are incorporated herein by reference.

### **Field of the Invention**

[0002] The present invention is concerned with devices for assisting bedridden or physically challenged people in moving and carrying out the necessary functions of daily living. More specifically, this invention pertains to transfer seats, such as commode seats or shower seats, 10 that are attached to conventional commodes, bedside commodes, shower chairs, and similar articles in order to allow a person to be easily transferred to such articles from a bed, wheelchair, or other piece of furniture.

### **Background of the Invention**

[0003] People who are temporarily or permanently confined to beds or wheelchairs, or who 15 have difficulty moving about their home or hospital room because of a disabling condition, often utilize a portable bedside commode. A conventional bedside commode is manufactured of lightweight tubular material in the form of a chair or seating device in that four legs or supporting members and a seat back are provided. Support members function to bear a receptacle into which bodily wastes are deposited, a U-shaped seat, like that of conventional commodes, and a seat lid. 20 The bedside commode is typically situated next to the bed or wheelchair supporting the confined person. Some individuals can be transferred from the bed or wheelchair to the seat of the commode without incident or difficulty. Other individuals, particularly heavier individuals or more seriously disabled individuals, require significant assistance from one or more caregivers, who may risk back injury when lifting an individual because a sizable gap of space exists between the outer edge of the

commode seat and the supporting device. With conventional designs, the commode seat occupies only a limited area in relation to the footprint or outer perimeter of the commode frame. When the frame of a bedside commode comes into contact with the frame of an adjacent bed or wheelchair, a gap is formed between the commode seat and supporting surface of the bed or wheelchair. A confined person who lacks the physical strength or agility to sit upright and transfer his or her body to the bedside commode either by sliding or standing and sitting may be injured if he or she attempts to accomplish such a transfer over the gap between the supporting device and the bedside commode without the help of a caregiver.

[0004] Numerous designs for patient assistance devices have been provided in the art. For example, U.S. Pat. No. 4,719,655, for an Invalid Transfer Device (Dean), and U.S. Pat. No. 5,526,541 (Massey, *et al.*), for a Patient Transfer Stand, disclose devices that are designed primarily to lift or transfer disabled patients from a first supporting apparatus, such as a wheelchair, bed, commode, or sofa, to a second supporting apparatus. U.S. Pat. No. 5,687,431 (Garrett), for a Toilet Transfer Device, describes a toilet transfer bench designed for use with toilets in handicap stalls in order to facilitate the use of such toilets by persons in wheelchairs. U.S. Pat. No. 5,373,591 (Myers), for a Shower-Commode Chair and Transfer Track, and U.S. Pat. No. 5,822,809 (Gallo), for a Transfer Seat Apparatus, illustrate devices that allow a confined or physically person to be transported to and positioned over a bathtub or commode without requiring the person to be lifted from a seat member.

[0005] As illustrated by the background art, efforts are continuously being made in an attempt to develop devices for assisting in the transfer of confined or physically challenged individuals from a bed or wheelchair to a toilet, shower, or other location. Persons with disabilities also use other specialized support devices to assist them in the tasks of everyday living, including shower chairs and "geri-chairs." Still, there exists a lack of suitable devices to provide for safe and stable transfer of physically-challenged persons from a bed or wheelchair to devices such as toilets or showers.

## SUMMARY OF THE INVENTION

[0006] The present invention overcomes the deficiencies associated with the prior art by providing a transfer board and extended transfer platform that eliminates the inconvenient and often dangerous gap that exists when the user is attempting to move from a bed or wheelchair to a patient assistance device such as a commode, shower chair, or other type of seat. The extended transfer platform of the present invention provides a novel component of a patient assistance device, providing a surface along which a patient can be moved with minimal lifting to be positioned upon a seat portion of the device. Described briefly, according to a typical embodiment, the invention presents an extended seat that consists of a flat, rectangular elongate member that is comprised of top and bottom sides, lateral sides extending from the seating portion of the seat to form an extended transfer platform, and front and rear side edges. The rear side edge of the seat is fitted with fasteners so that the seat can be attached to the frame of a bedside commode, standard commode, or shower chair in pivoting engagement. An aperture may be formed within the central seating portion of the seat to be aligned over a commode receptacle when the seat is attached to the commode. The front side edge of the seat is partially formed with a lip that extends from the side edge for some distance, and the side edges are chamfered on the top side. The seat can be manufactured of a variety of lightweight, durable materials, such as wood, plastic, fiberglass, and the like.

[0007] When the seat is attached to a bedside commode, the seat can be adjusted to a lower, seating position at which the lower side of the extended transfer platform makes contact with the supporting frame of a bedside commode, and the aperture is aligned directly over the commode receptacle. The lateral sides formed by the seat extend for some distance beyond the perimeter of the commode frame, thereby providing a continuous extended transfer platform upon which a patient or confined person can traverse once the seat is positioned next to a support surface of a bed, wheelchair, etc. The seat can be raised upright upon the fasteners to allow access to a commode receptacle or other device upon which the seat is mounted for cleaning and replacement.

[0008] In other embodiments of the invention, the seat can be attached to a shower chair, geri-chair, rehab commode, conventional commode, or other support device used by a person needing assistance and support when transferring from an adjacent position.

[0009] Additional features of the invention will be described below. It should be appreciated by those skilled in the art that the invention may readily be modified or used for equivalent purposes to those described in the specification without departing from the spirit and scope of the invention.

[0010] Accordingly, it is one object of the invention to provide a low-cost, easy-to-manufacture commode seat having an extended transfer platform. An additional object of the invention is to provide an easy-to-use and versatile extended transfer seat for commodes, toilet chairs, wheel chairs, shower chairs, and similar devices that serve similar purposes. Another object of the invention is to provide an extended commode seat, or extended transfer platform, that can be used with conventional bedside commodes and standard bathroom commodes. Yet another object of the invention is to provide an extended commode seat that is comprised partially of lateral sides that extend beyond the footprint or perimeter of the supporting frame of a conventional bedside commode in order to allow a continuous supporting transfer platform to be achieved once the commode is positioned next to a patient supporting device such as a bed or wheelchair.

[0011] The invention provides a transfer platform comprising a seat portion and at least one side portion extending from the seat portion; and a chamfered edge on one or both side portions, thereby providing a slightly inclined surface at an outer margin of the platform. The transfer platform further comprises a raised lip extending along a first edge of the seat portion, and at least one fastening means operably connected to a second edge of the seat portion, the second edge being parallel to the first edge. In one embodiment of the invention the first edge will be represented by the front of the seat and the second edge will be represented by the back of the seat. The transfer platform of may contain an aperture within the seat portion through which waste may be transmitted into a receptacle positioned beneath the aperture. The side portion of the transfer

platform can be formed of unitary construction with the seat portion or may be formed separately and operably connected to the seat portion by at least one hinged element, the side portion thereby being positioned either perpendicular to the seat portion for storage, or positioned so that the side portion is extended from the seat portion to form a substantially planar surface for a physically challenged individual to be moved across the side portion to access the seat portion.

[0012] The invention further provides a method of using a transfer platform to enable a physically challenged individual to be more easily moved from a bed or wheelchair to a patient-assistance device, the method comprising providing a transfer board as previously described, attaching the transfer board by means of at least one fastening means to a patient assistance device; and sliding the physically challenged individual across the at least one side portion to be positioned on the seating portion. In one embodiment of the invention, the fastening means can be a standard commode hinge, and the transfer platform can be attached to a standard commode or portable toilet chair to replace the existing seat. The transfer platform of the present invention can also comprise an element of a shower chair.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a perspective view of a conventional bedside commode with a conventional seat removed therefrom.

[0014] FIG. 2 is a perspective view of an extended commode seat or extended transfer platform in accordance with the present version of the invention attached to a conventional bedside commode.

[0015] FIG. 3 is a perspective view of an extended commode seat or extended transfer platform in accordance with the present version of the invention raised upright to allow access to a receptacle of a conventional bedside commode.

[0016] FIG. 4 is a perspective view of an alternate embodiment of an extended transfer

platform in accordance with the present version of the invention.

[0017] FIG. 5a and 5b are plan views of alternate embodiments of the extended commode seat, or extended transfer platform, having angled bilateral (5a) or unilateral (5b) extensions.

[0018] FIG. 6a is a plan view of a further embodiment of the extended commode seat in which the lateral extensions of the extended transfer platform are hinged to the seating portion.

FIG. 6b is a front view of the commode seat of FIG. 6a.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Referring now to the drawings and to FIG. 1 in particular, there is illustrated a conventional bedside commode 10, which is constructed generally of a lightweight tubular frame 12, waste receptacle 14, lid 16, and seat support members 18a, b. The bedside commode 10 is typically furnished with a conventional U-shaped seat that is pivotally attached to seat support member 18a. For purposes of this description, the commode 10 is illustrated without a conventional seat. Also, it will be apparent to those of skill in the art that the present invention is not limited to use with the commode seat of FIG. 1. Rather, the extended transfer platform can be part of any one of a number of assisting and supporting devices where a user must transfer to the device from an adjacent bed or seat. For example, the commode seat of FIG. 1 could be provided with locking wheels such that it would function as a shower chair. Alternatively, the extended transfer platform could be integral to a rehab commode chair that is provided with a wheelchair type mobility mechanism.

[0020] Referring to FIG. 2, one embodiment of the present invention is shown, combining a conventional bedside commode 10 with a commode seat 20 having an extended transfer platform of the present invention, the seat 20 being pivotally attached to the commode 10 at a seat support member 18a. The extended transfer platform forming a commode seat 20, displayed in the lowered

or seating position, is preferably of a unitary construction configured into a flat, elongate, rectangular, or substantially rectangular to ovoid member that is manufactured of lightweight, durable, attractive material, such polished wood or wood products, plastic, fiberglass, and the like.

In the embodiment as shown, the extended transfer platform forming the commode seat 20 includes two lateral sides 22a, b extending from a central seating portion, front side 24 edge, rear side 26 edge, top side 28, and bottom side 38 (FIG. 3). An ovoid aperture 30 can be formed in the central seating portion of the seat 20 so that when the seat 20 is lowered as illustrated, the aperture 30 is aligned directly over the receptacle 14 in order to allow access to the interior of the receptacle 14. The lateral sides 22a, b form an extended transfer platform to facilitate a continuously supported transfer of the user from an adjacent bed or wheel chair to the seating portion of the seat 20 and back again. The selection of materials for seat 20 is conventional, with the seating portion of seat 20 being adapted to support a user in a seated position over the receptacle, and the extended transfer platform having sufficient strength to support the user during the transfer process to and from the adjacent bed, wheelchair, or the like. Although an extended transfer platform is shown with two lateral sides, it is within the scope of the invention to form the transfer platform with one lateral side, as shown in Fig. 5b.

[0021] Alternately, the extended transfer platform may have multiple smaller holes formed within it to facilitate drainage if the board is used to form the seat of a shower chair.

[0022] The extended commode seat 20 is additionally constructed with rounded corners formed at the junction of any two sides or side edges and with chamfered edges 32a, b at the lateral sides 22a, b on the top side 28. The chamfered edges 32a, b present a slightly inclined surface at the outer margin of the transfer platform that assists in the transfer of a person onto or off the seat 20. A lip 34 extends partially from the front side 24 edge for some distance sufficient to provide a grasping surface of the seat directly over a seat support member 18b. Two fasteners 36a, b are attached at the rear side 26 edge of the seat 20 to the bottom side 38 thereof (FIG. 3). The fasteners are positioned so that the extended transfer platform can be utilized on any standard commode,

portable commode or toilet chair, or other similar device. Since most commode seats are fitted with a universal fitting that is 4 inches on center, the fasteners used with the extended transfer platform of the present invention can comprise hinge mounts of a type that is used on standard commodes, thereby facilitating attachment of the extended transfer platform to a variety of existing devices, 5 such as bathroom toilets or portable toilet chairs. The extended transfer platform can be removed and carried to a different location for use, for example, by placing it in the trunk of a car or fitting it into a sleeve positioned on the back of a wheelchair. Thus, the extended transfer platform of the present invention can provide a mobile unit for use in homes, hotels, motels, and other locations where existing toilet facilities are not readily accessible to physically disabled individuals. The 10 extended transfer platform of the present invention, can, for example, be provided for re-fitting standard handicap-accessible toilets in public restrooms, hotel bathrooms, and apartment bathrooms.

[0023] Referring again to FIG. 2, the lateral sides 22a, b forming the extended transfer platform extend for some distance beyond the seat support members 18a, b and the footprint and 15 perimeter of the frame 12 in order to allow either side 22a, b to at least partially overlap and preferably make contact with the support surface of a bed or wheelchair when the commode 10 with the seat 20 attached is positioned for use next to the bed or wheelchair. In this manner, a continuous, uninterrupted transfer and support platform extending from the bed or wheelchair to the seating portion of the seat 20, including aperture 30, is achieved. The transition from the supporting 20 surface of the bed or wheelchair to the seat 20 is facilitated by the rounded corners and chamfered edges 32a, b of the seat 20.

[0024] As necessary, the extended transfer platform forming the seat can be raised upright as displayed in FIG. 3 upon the fasteners 36a, b in order to allow direct access to the receptacle 14 for cleaning, emptying, and replacement.

25 [0025] In FIG. 4, a second embodiment of the extended transfer platform 40 is displayed attached to a conventional bedside commode 10. This embodiment 40 is generally constructed as the first embodiment 20, configured into a flat, elongate, rectangular shape with lateral sides 42a, b,



front side 44 edge, edge, rear side 46, edge, top side 48, aperture 50, chamfered sides 52a, b, rounded corners, and front lip 54. The seat 38 can be pivotally attached to the commode 10 with appropriate fasteners 56a, b. In this embodiment, one portion of the seat 40 between the aperture 50 and a lateral side 42a is formed with a rectangular opening. A roller assembly 58 or apparatus, 5 which is attached to the perimeter side walls of the aperture, is comprised of elongate tubular axles or rods. In one embodiment of the invention, a belt or other covering can be positioned around the elongate tubular axles or rods to facilitate transfer of an individual as the rods are rolled, without pinching the skin of the individual between the rods or tubular axles. Positioned over the rods or tubular axles, the belt can move from side to side to aid in movement of an individual laterally 10 across the extended transfer platform. The extended transfer platform of the present invention can be formed with rods or tubular axles, or without such devices to form a substantially flat, smooth surface to the transfer platform, and these should not be construed as limitation on the scope of the version of the invention, but rather as an exemplification of embodiments thereof.

[0026] FIGS. 6a and 6b show another embodiment of the invention in which the extended 15 transfer platform (lateral sides 22a, b) is attached to the seating portion of the seat 10 by use of conventional hinges 15. Since standard toilet seats have seat hinges placed four inches apart, the extended transfer board of the present invention, fitted with complementary hinge fittings to the hinges of a standard toilet, can be utilized with any standard toilet, commode, or portable toilet. The extended transfer platform can therefore be utilized to convert an existing toilet chair, or a 20 standard bathroom commode, into a more easily accessible unit so that a physically-challenged individual can more easily move himself or herself onto the platform to utilize the toilet chair or standard commode, or a caregiver can more easily help the individual to do so. The design of the present extended transfer platform makes it useful for adapting bathrooms in homes, hotels, motels, and other environments, for access by handicapped individuals. FIG. 5 is a plan view of yet another 25 embodiment of the invention showing the lateral sides 22a, b extending at an angle away from the seating portion. In some applications, the angled configuration of FIG. 5 can improve the ability of

the user to properly position the commode, etc. proximate to the other seating article.

[0027] A support leg or other structural member can be added to provide additional strength. The extended transfer platform can be combined with a different chair-like or toilet device, including a shower chair, rehab commode, geri-chair, wheel chair, a conventional 5 commode, or any other similar device where a stable and continuous transfer surface is needed to assist a disabled person in moving onto the seat.

[0028] The foregoing is considered as illustrative only of the principles of the invention. Since numerous modifications and changes will readily occur to those skilled in the art, given the benefit of the present disclosure, it is understood that the present invention is not limited to the 10 exact construction and methods of use shown and described, and that all suitable modifications and equivalents are considered to fall within the scope of the invention. Thus, although there have been described particular embodiments of the present invention of a new and useful Transfer Seat with Extended Transfer Platform, it is not intended that such references be construed as limitations upon the scope of this invention except as set forth in the following claims.